

Course Material

Google Data Studio\Looker Studio

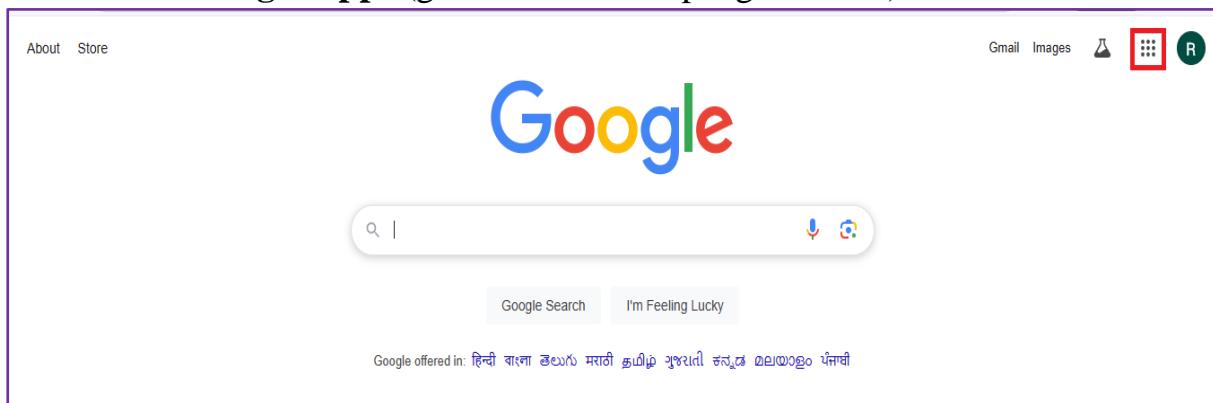
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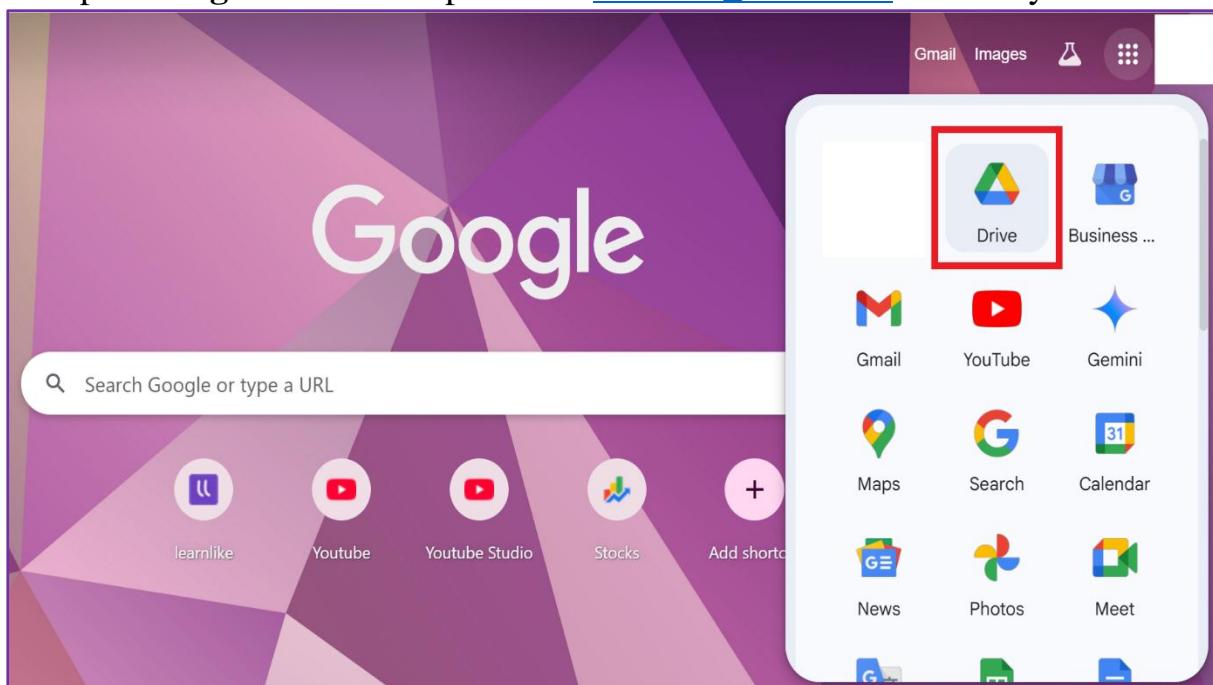
Installation

Sign Up/Log In:

1. Open your Google Account.
2. Click on **Google Apps** (grid icon in the top-right corner).



3. Download the [Machine_Sales.xlsx](#) from the shared Google Drive folder.
4. Open **Google Drive** and upload the [Machine_Sales.xlsx](#) file into your drive.



Drive

+ New

Home

- My Drive
- Computers
- Shared with me
- Recent
- Starred
- Spam
- Trash
- Storage

Welcome to Drive

Suggested folders

- Colab Notebooks (In My Drive)
- Supporting files (In Shared with me)
- Docs (In My Drive > Documents)
- Books (In My Drive)

Suggested files

- Machine_Sales
- Machine_Sales.xlsx

Drive

New folder

File upload

Folder upload

Google Docs

Google Sheets

Google Slides

Google Forms

More

Welcome to Drive

Suggested folders

- Colab Notebooks (In My Drive)
- Supporting files (In Shared with me)
- Docs (In My Drive > Documents)
- Books (In My Drive)

Suggested files

Open

Supporting files > Power BI

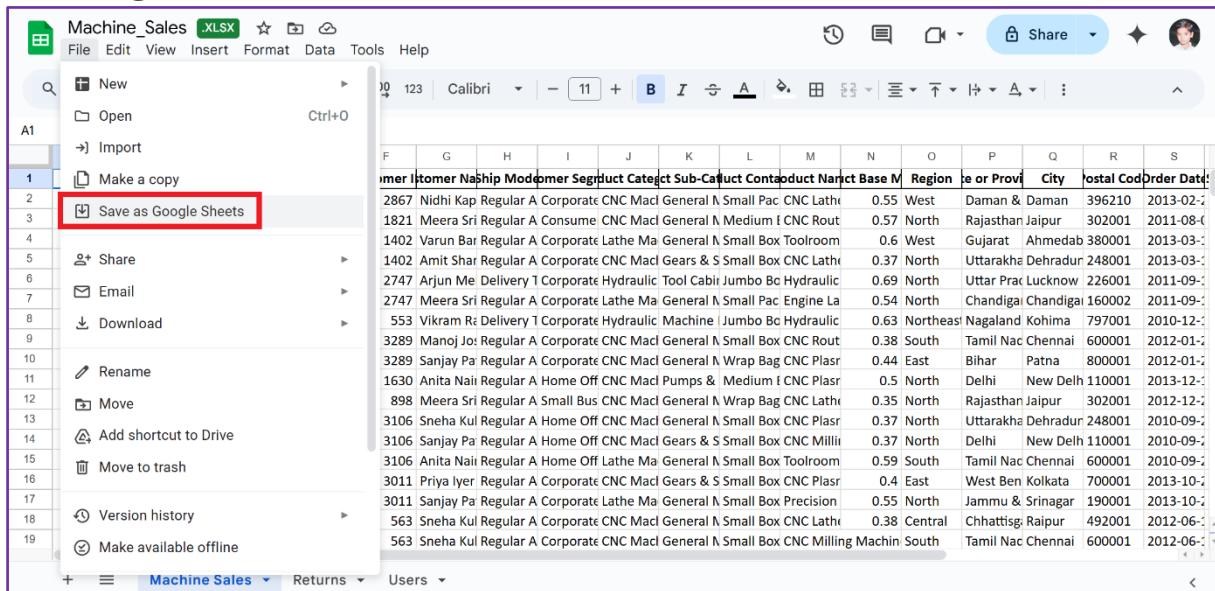
Organize

Name	Date modified	Type	Size
Customer Data.xlsx	17-10-2024 19:34	Microsoft Excel W...	1,578 KB
Machine_Sales.csv	23-03-2025 12:06	Microsoft Excel C...	2,187 KB
Machine_Sales.xlsx	25-03-2025 14:47	Microsoft Excel W...	1,354 KB
Northwind.accdb	17-10-2024 19:34	ACCDB File	5,632 KB
Report template.pptx	21-11-2024 13:05	Microsoft PowerP...	40 KB
Report template1.svg	21-11-2024 11:07	Chrome HTML Do...	15 KB

File name: Machine_Sales.xlsx

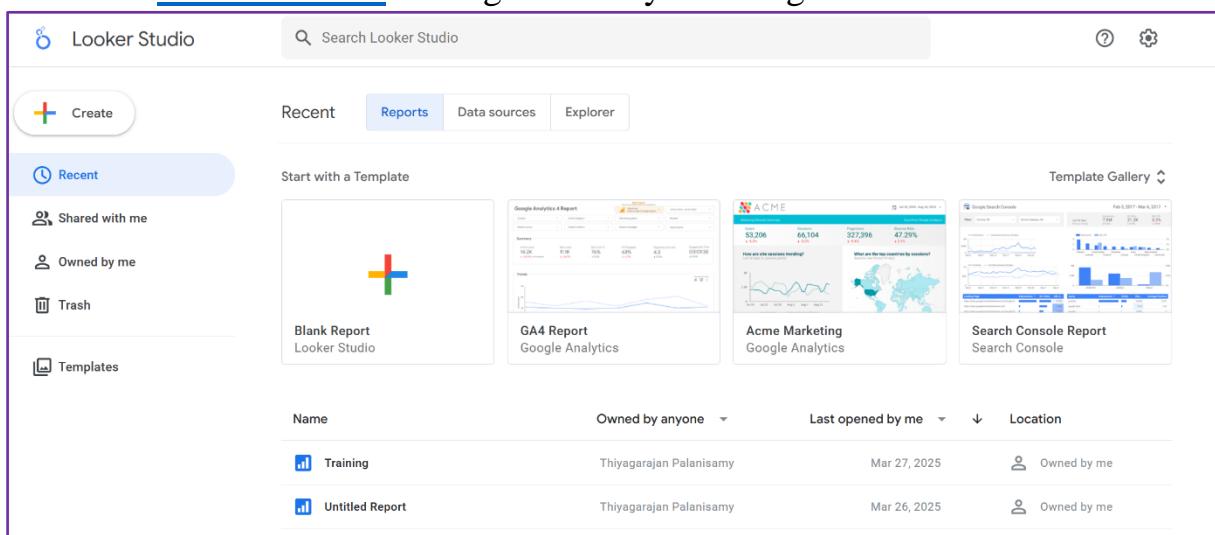
Open

5. Double-click to open the file in Google Drive, then click on **File → Save as Google Sheets**.



Looker Studio - User Guide

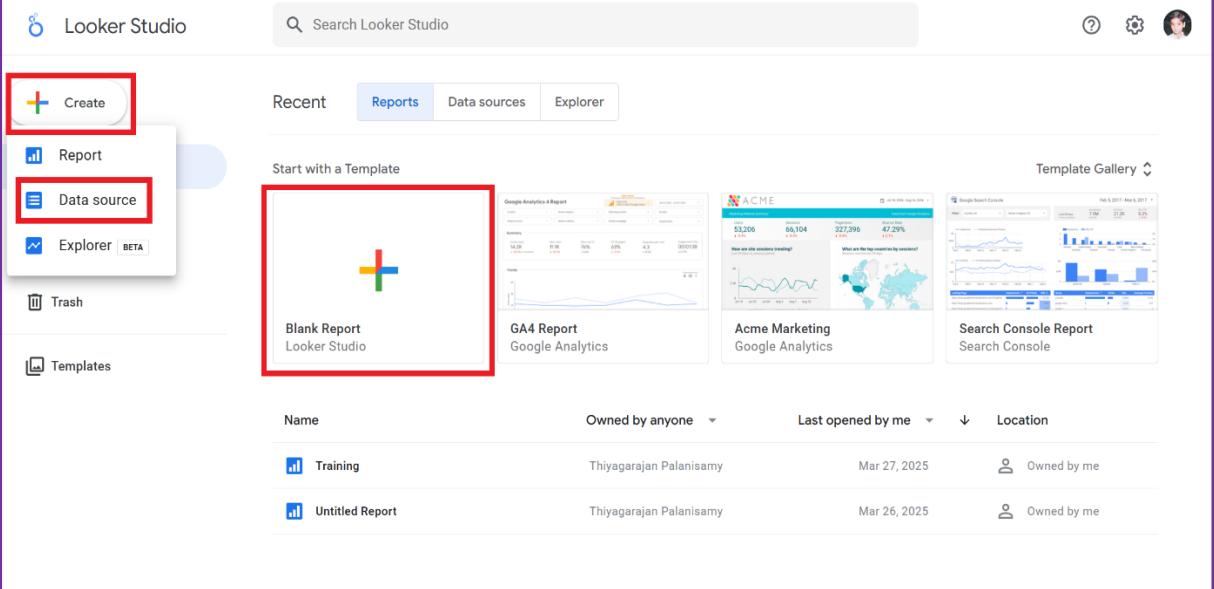
1. Go to [Looker Studio](#) and sign in with your Google Account.



The screenshot shows the Looker Studio interface. The top navigation bar includes 'Create', 'Recent', 'Reports' (which is selected), 'Data sources', and 'Explorer'. The 'Recent' section shows reports like 'Blank Report' (Looker Studio), 'GA4 Report' (Google Analytics), 'Acme Marketing' (Google Analytics), and 'Search Console Report' (Search Console). Below this is a 'Template Gallery' section with various report templates. A table at the bottom lists recent reports with columns for Name, Owner, Last opened by me, and Location.

Name	Owned by anyone	Last opened by me	Location
Training	Thiyagarajan Palanisamy	Mar 27, 2025	Owned by me
Untitled Report	Thiyagarajan Palanisamy	Mar 26, 2025	Owned by me

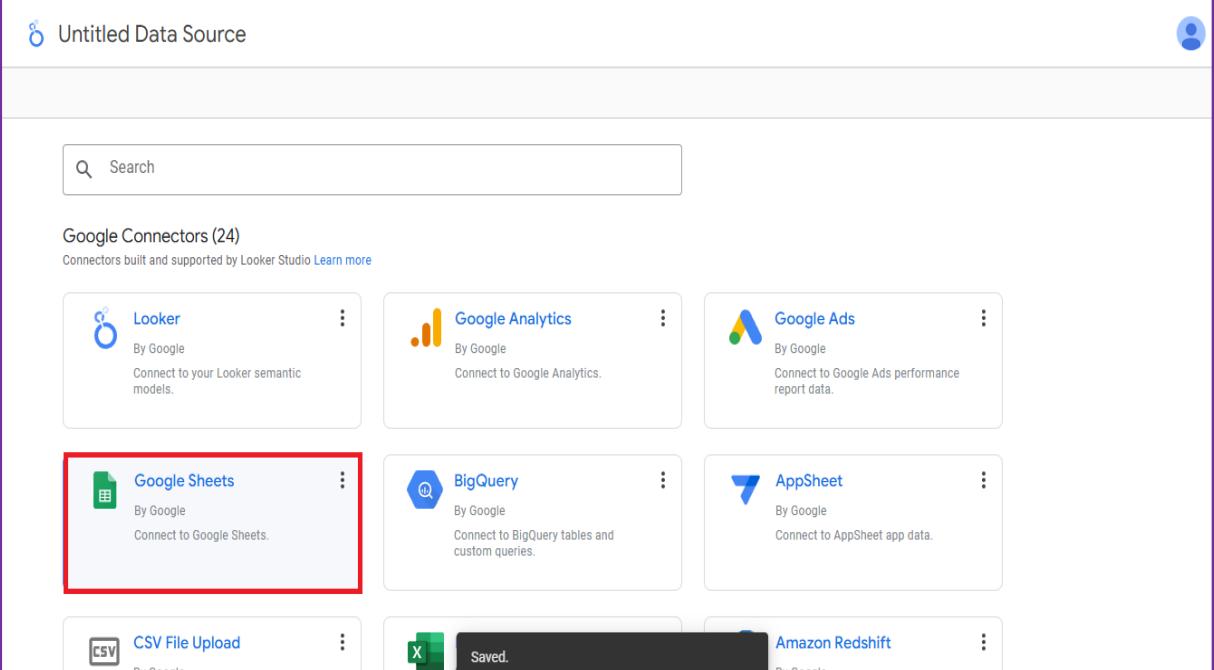
2. Click on **Blank Report** or go to **Create → Data source** option and choose a **data source** (Google Sheets).



The screenshot shows the Looker Studio dashboard. On the left, a sidebar has 'Create' and 'Data source' highlighted with red boxes. The main area shows a 'Blank Report' template and a 'Template Gallery' with various report examples like 'GA4 Report' and 'Acme Marketing'. Below is a list of recent reports.

Name	Owned by anyone	Last opened by me	Location
Training	Thiyagarajan Palanisamy	Mar 27, 2025	Owned by me
Untitled Report	Thiyagarajan Palanisamy	Mar 26, 2025	Owned by me

3. Click on Google Sheets.



The screenshot shows the 'Untitled Data Source' page. It features a search bar and a grid of connectors. The 'Google Sheets' connector, which includes a red box around its icon and title, is highlighted. Other connectors shown include Looker, Google Analytics, Google Ads, BigQuery, AppSheet, CSV File Upload, and Amazon Redshift.

4. Select Machine_Sales, choose the worksheet, and click on Add to import the Google Sheet into Looker Studio.

← Add data to report Data credentials: Thiagarajan Palanisamy X

Google Sheets
By Google
The Google Sheets connector allows you to access data stored in a Google Sheets worksheet.

[LEARN MORE](#) [REPORT AN ISSUE](#)

ALL ITEMS	Spreadsheet	Worksheet	Options
OWNED BY ME			<input checked="" type="checkbox"/> Use first row as headers
SHARED WITH ME	<input type="text"/> Search Spreadsheets	<input type="text"/> Search Worksheets	Column headers must be unique. Columns with empty headers will not be added to the data source.
STARRED	Machine_Sales	Machine Sales	<input checked="" type="checkbox"/> Include hidden and filtered cells
URL	Untitled form (Responses)	Returns	
OPEN FROM GOOGLE DRIVE	Dr.N.G.P Arts and Science College (Responses)	Users	
	Hindusthan (Responses)		
	LearnLike Project Details		

[Cancel](#) [Add](#)

5. If you use **Create → Data source**, a preview of the data will be displayed. Looker Studio automatically categorizes most data, except for **Geo (Geography)** fields. You can manually set **Geo** categories for fields like **Country, State, and City** as needed. Click on **CREATE REPORT** to proceed.

Machine Sales - Machine Sales

Scope: Reusable | Data credentials: Roshan sriram | Data freshness: 15 minutes | Community visualizations access: On | Field editing in reports: On | [CREATE REPORT](#) | [EXPLORE](#)

[EDIT CONNECTION](#) | [FILTER BY EMAIL](#) [+ ADD A FIELD](#) [+ ADD A PARAMETER](#)

This data source is reusable, so report viewers cannot access connection information, but have access to some metadata, including column names, the connector type, [Learn More](#) [Dismiss](#)

Field	Type	Default Aggregation	Description	Search fields
City	RBC Text	None		
Country	Country	None		
Customer ID	123 Number	Sum		
Customer Name	RBC Text	None		
Customer Segment	RBC Text	None		
Discount	123 Number	Sum		
Order Date	Date & Time	None		
Order ID	123 Number	Sum		
Order Priority	RBC Text	None		
Postal Code	RBC Text	None		

Machine Sales - Machine Sales

Scope: Reusable | Data credentials: Roshan sriram | Data freshness: 15 minutes | Community visualizations access: On | Field editing in reports: On | [CREATE REPORT](#) | [EXPLORE](#)

[EDIT CONNECTION](#) | [FILTER BY EMAIL](#) [+ ADD A FIELD](#) [+ ADD A PARAMETER](#)

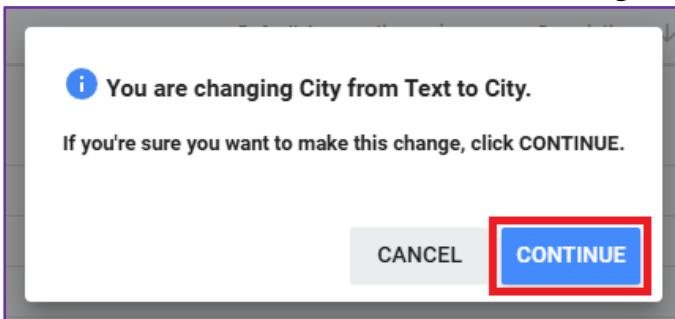
This data source is reusable, so report viewers cannot access connection information, but have access to some metadata, including column names, the connector type, [Learn More](#) [Dismiss](#)

Field	Type	Default Aggregation	Description	Search fields
City	RBC Text	None		
Country	123 Numeric	Sum		
Customer ID	RBC Text	Sum		
Customer Name	Date & Time	Sum		
Customer Segment	Boolean	Sum		
Discount	Geo	Sum		
Order Date	123 Currency	Sum		
Order ID	URL	Sum		
Order Priority	Text	Sum		
Postal Code	Text	Sum		

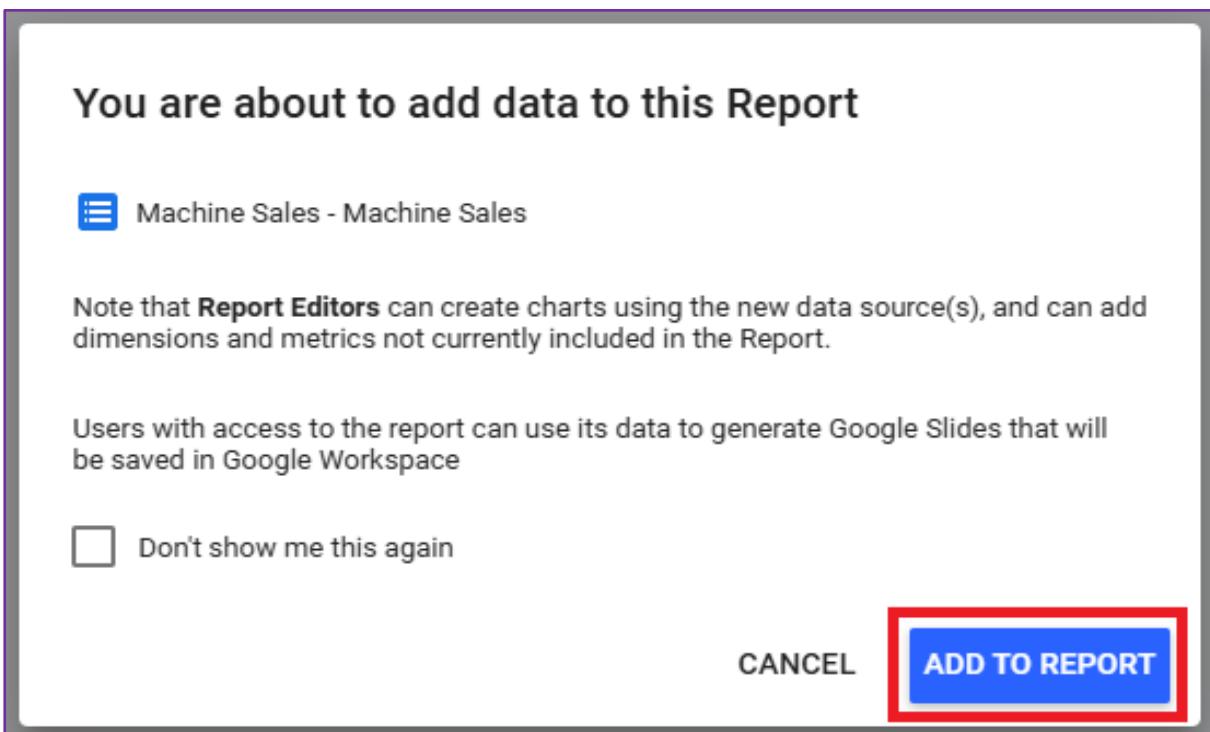
A dropdown menu is open for the 'Discount' field, showing the following options: None, Continent, Subcontinent, Country, Country subdivision (1st level), Country subdivision (2nd level), Designated market area, City, Postal code, Address, and Latitude, Longitude. The 'City' option is highlighted.

[REFRESH FIELDS](#) [All Fields](#) [Data Preview](#) 26 / 26 Fields

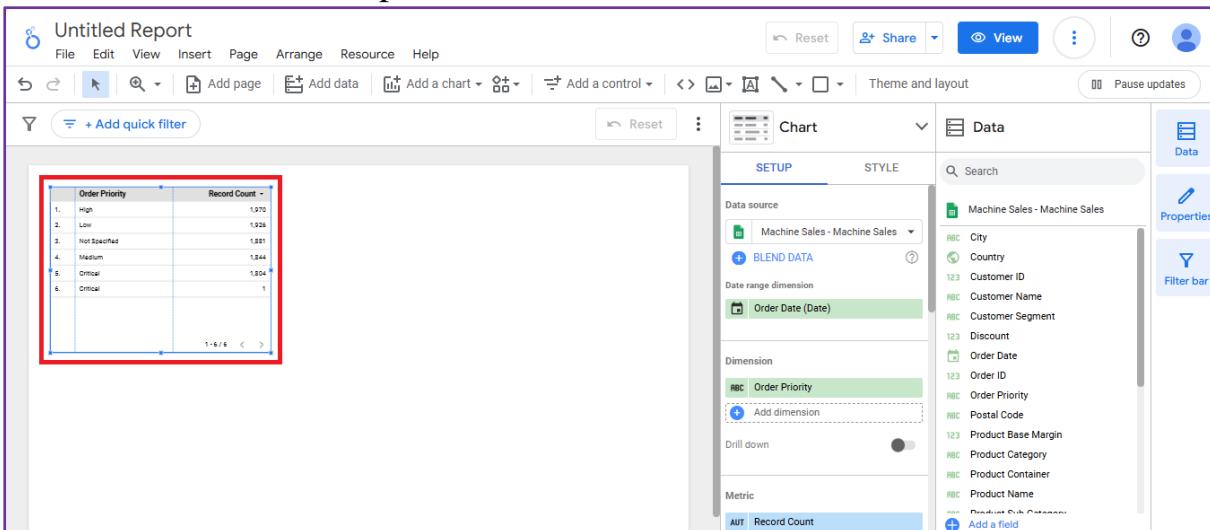
6. Click the **CONTINUE** button to navigate to the Looker Studio page canvas.



7. Click the **ADD TO REPORT** button to add the data source.

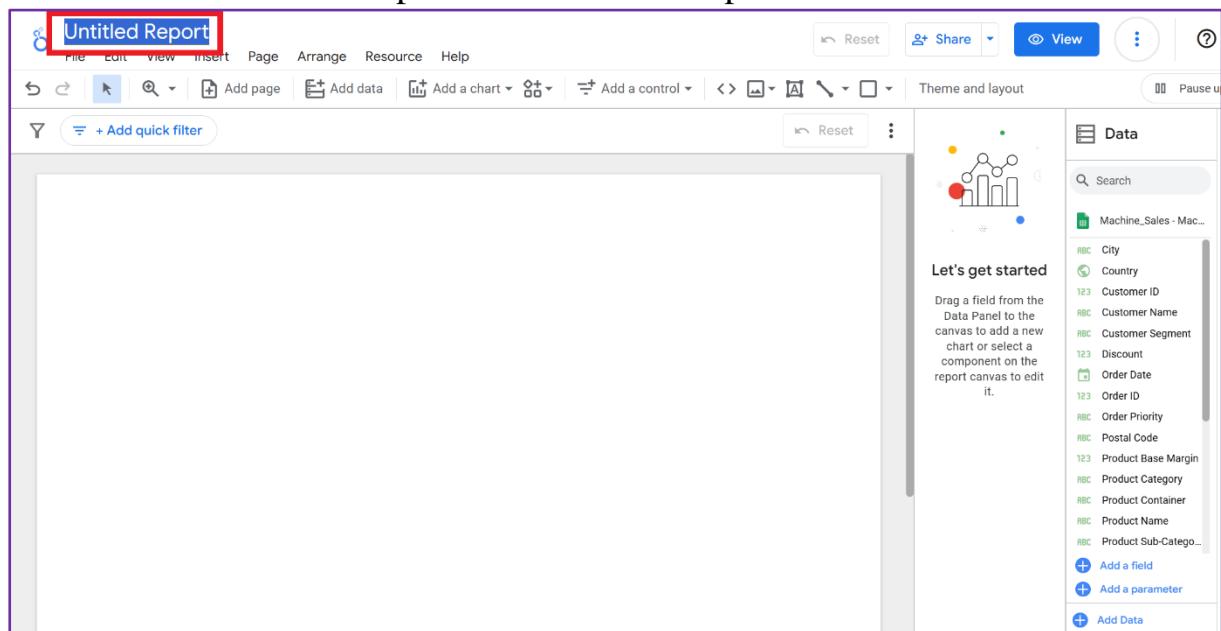


8. A blank report with a default table visualization will be generated. Click on the chart to select it, then press **Delete** to remove it.

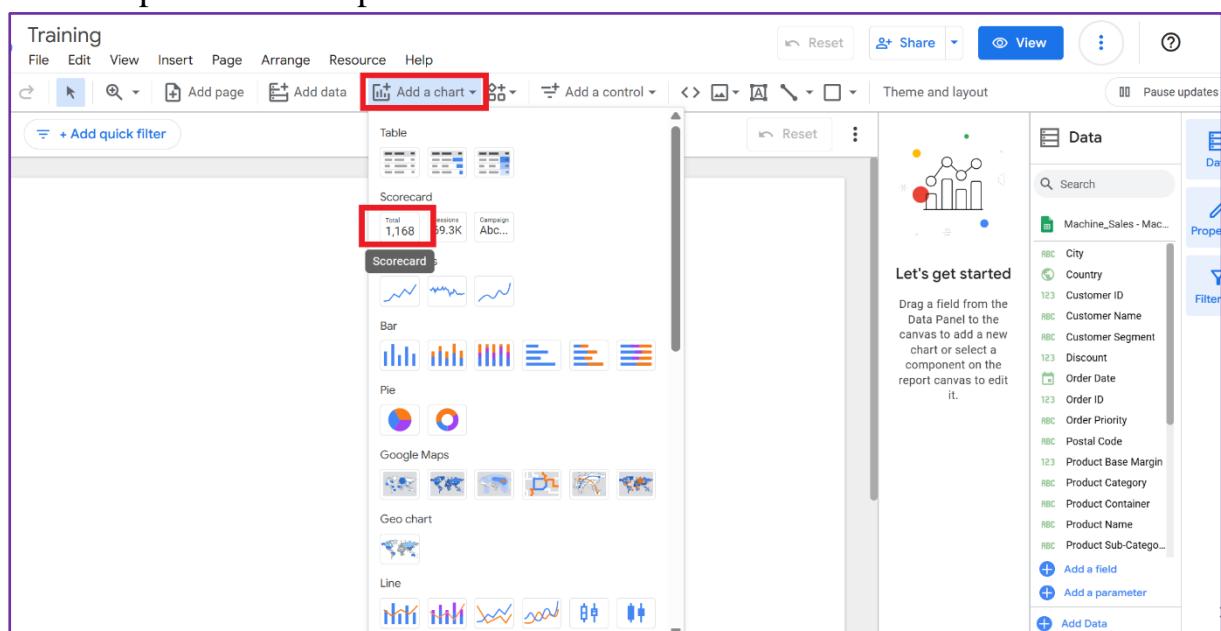


Order Priority	Record Count
1. High	1,970
2. Low	1,928
3. Not Specified	1,881
4. Medium	1,844
5. Critical	1,804
6. Critical	1

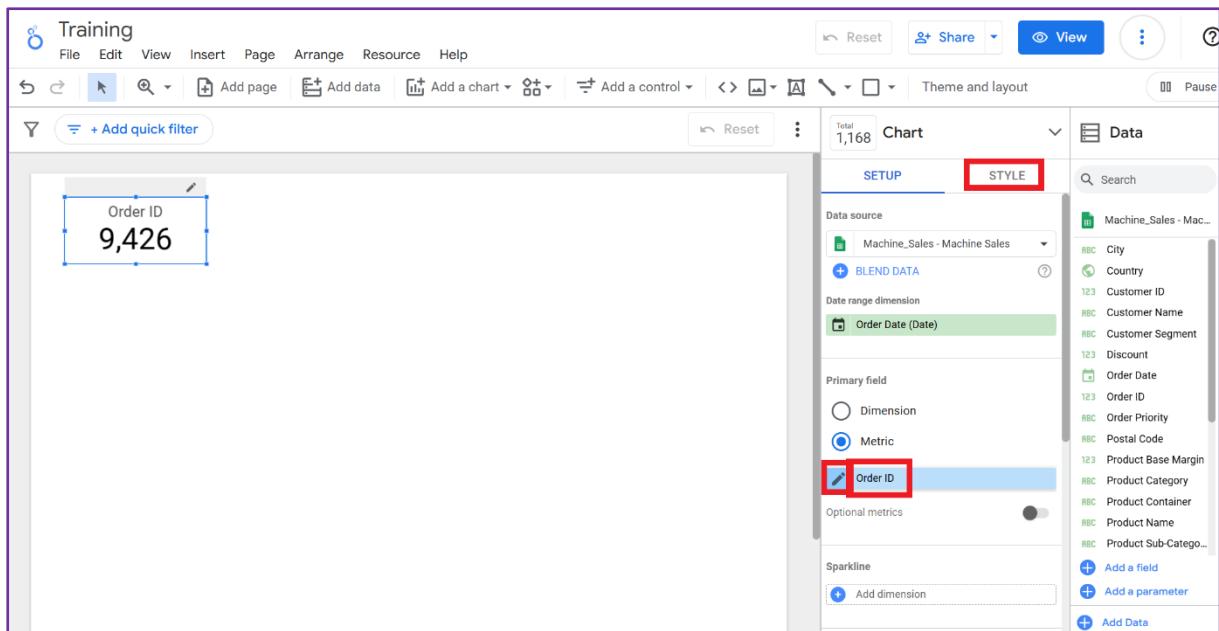
9. Double click on the top left to rename the report.



10. Click **Add a Chart** in the top menu. Select **Scorecard** from the list. Click on the report canvas to place the table.

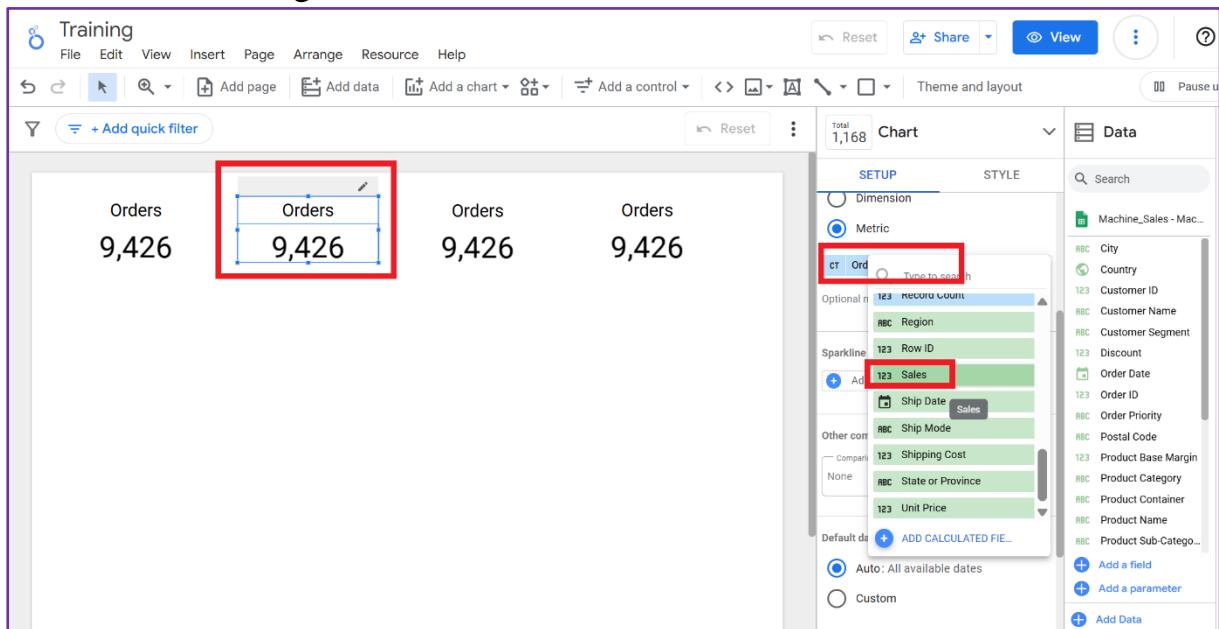


11. The Scorecard value **Metric** can be changed and the type of calculation can also be changed. E.g. Sum, Count, Average etc. For styling click on the **STYLE** options.



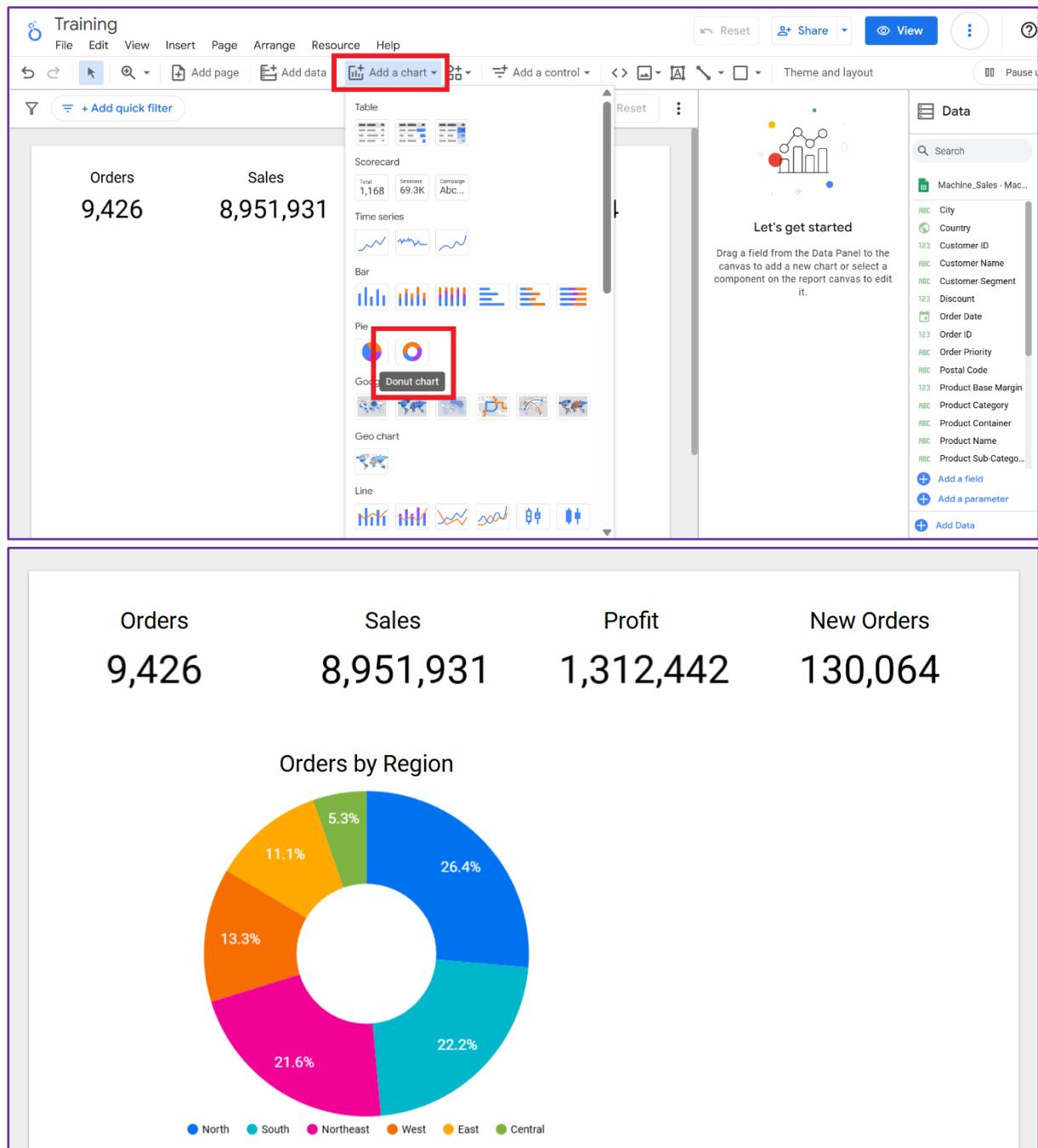
The screenshot shows a Power BI desktop interface with a 'Scorecard' card. The card displays the text 'Order ID' above the value '9,426'. The 'STYLE' tab is currently selected in the ribbon. The 'SETUP' tab is also visible. On the right side, there is a 'Data' pane listing various fields from the 'Machine_Sales - Machine Sales' data source, such as Order Date, Order ID, and Sales.

12. Duplicate the Scorecard by copying and pasting it. Click on each copied card to modify the metric and adjust the calculations as needed. Repeat this process for the remaining two cards.



The screenshot shows three identical Scorecard cards side-by-side. Each card has the text 'Orders' above the value '9,426'. The 'Metric' tab is selected in the ribbon. A dropdown menu is open over the third card, listing various metrics: 'Record Count', 'Region', 'Row ID', 'Sales', 'Ship Date', 'Ship Mode', 'Shipping Cost', 'State or Province', and 'Unit Price'. The 'Sales' option is highlighted in the dropdown.

13. Insert a new **Donut Chart** and set the metric to **Count of Order ID**. Use **Region** as the dimension to visualize the distribution of orders across different regions.

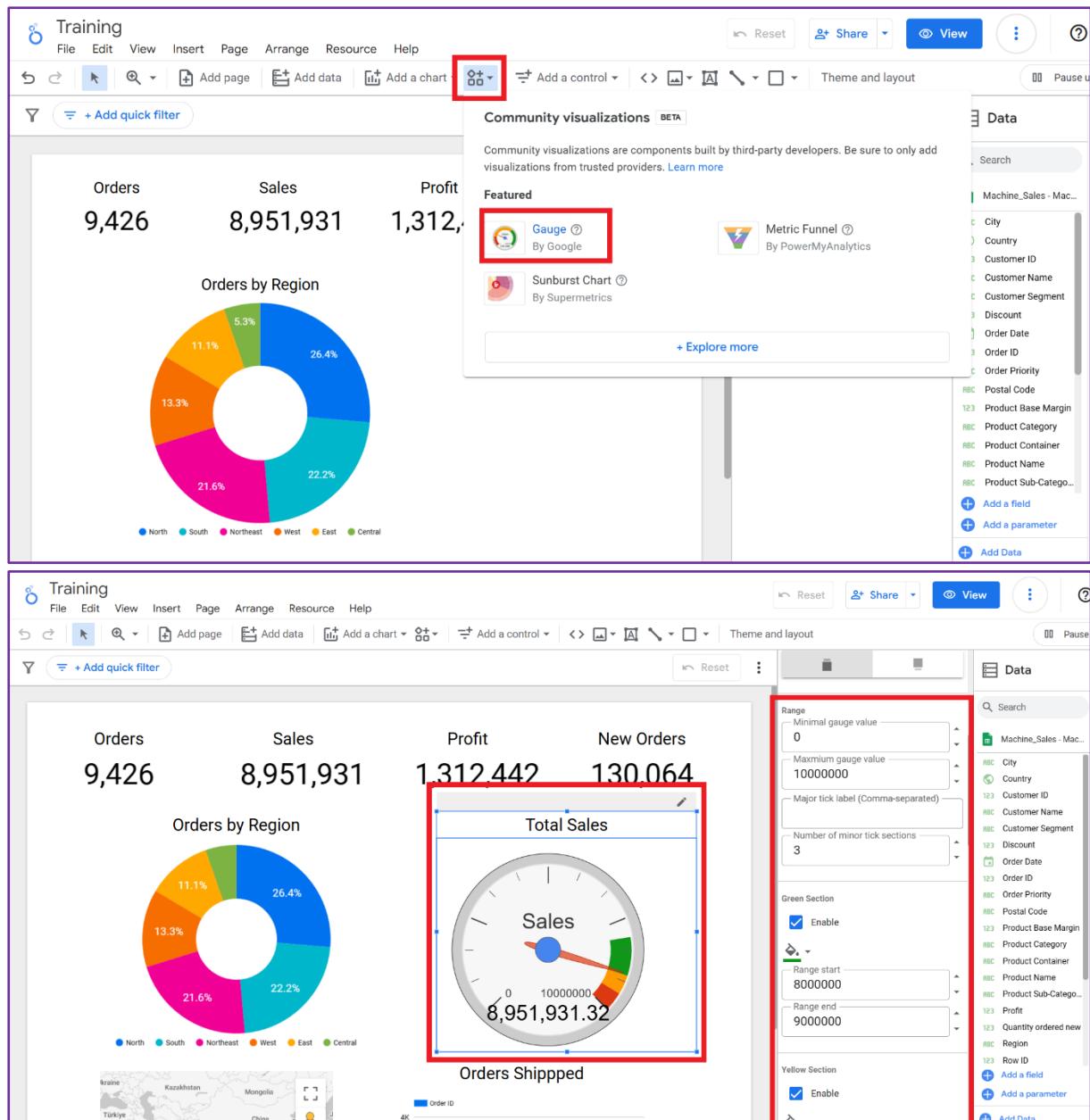


The screenshot shows the Power BI Report Builder interface. At the top, there's a navigation bar with 'Training' selected, followed by 'File', 'Edit', 'View', 'Insert', 'Page', 'Arrange', 'Resource', and 'Help'. Below the navigation bar is a toolbar with icons for 'Reset', 'Share', 'View', and a 'Pause' button. A red box highlights the 'Add a chart' button in the toolbar.

On the left side, there's a 'Data' pane containing a search bar and a list of fields from 'Machine_Sales - Mac...'. The fields listed include: RBC City, Customer ID, Customer Name, Customer Segment, Discount, Order Date, Order ID, Order Priority, Postal Code, Product Base Margin, Product Category, Product Container, Product Name, Product Sub-Catego..., and three buttons for 'Add a field', 'Add a parameter', and 'Add Data'.

The main canvas area displays four summary metrics: 'Orders' (9,426), 'Sales' (8,951,931), 'Profit' (1,312,442), and 'New Orders' (130,064). Below these metrics is a donut chart titled 'Orders by Region'. The chart shows the percentage distribution of orders across six regions: North (26.4%), South (22.2%), Northeast (21.6%), West (13.3%), East (11.1%), and Central (5.3%). The legend at the bottom identifies the colors for each region: North (blue), South (teal), Northeast (pink), West (orange), East (yellow), and Central (green).

14. Go to **Community visualizations**, select **Gauge Chart**, and set the metric to **Sum of Sales** to visualize total sales performance. Edit the Min & Max values for the Gauge chart and customize the green, yellow, and red ranges to represent different performance levels.



The screenshot shows a dashboard interface with the following elements:

- Top Bar:** Training, File, Edit, View, Insert, Page, Arrange, Resource, Help.
- Toolbar:** Reset, Share, View, Add a control, Add a chart, Add a quick filter.
- Metric Summary:** Orders (9,426), Sales (8,951,931), Profit (1,312,442).
- Orders by Region:** A donut chart showing distribution across six regions: North (26.4%), South (22.2%), Northeast (21.6%), West (13.3%), East (11.1%), and Central (5.3%).
- Community Visualizations:** A section titled "Community visualizations BETA" featuring "Featured" components: "Gauge" (By Google), "Metric Funnel" (By PowerMyAnalytics), and "Sunburst Chart" (By Supermetrics). A link "+ Explore more" is also present.
- Right Panel (Data):** A sidebar listing data fields under "Machine_Sales - Mac...". Fields include: City, Country, Customer ID, Customer Name, Customer Segment, Discount, Order Date, Order ID, Order Priority, Postal Code, Product Base Margin, Product Category, Product Container, Product Name, Product Sub-Catego..., and several "RBC" fields. Buttons for "Add a field", "Add a parameter", and "Add Data" are at the bottom.
- Bottom Panel (Data):** A detailed configuration panel for a gauge chart. It includes sections for "Range" (Minimal gauge value: 0, Maximum gauge value: 10000000), "Major tick label (Comma-separated)", "Number of minor tick sections": 3, "Green Section" (Enable checked, Range start: 8000000, Range end: 9000000), and "Yellow Section" (Enable checked, Range start: 8000000, Range end: 9000000). A "Sales" gauge chart is displayed with values 1,312,442 and 130,064.

15. Select **Bubble map** Chart to visualize sales distribution by **State** or **City** for a geographical representation of sales data. Drag and drop the default location field from Country to State or City to refine the geographic sales visualization. Customize the Map Styling by switching to satellite view for a more detailed geographical representation.

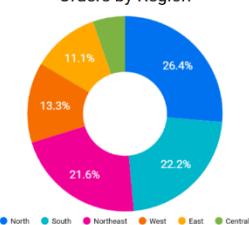
Training

File Edit View Insert Page Arrange Resource Help

Add page Add data **Add a chart** Add a control Theme and layout Pause

+ Add quick filter

Orders by Region



North 26.4%
South 22.2%
Northeast 21.6%
West 13.3%
East 11.1%

Table Scorecard Time series Bar Pie Google Maps Line

Bubble map

Data Last Updated: 3/29/2025 8:27:48 PM

Let's get started
Drag a field from the Data Panel to the canvas to add a new chart or select a component on the report canvas to edit it.

Data

Search Machine_Sales - Mac...
 RBC City
 RBC Country
 123 Customer ID
 RBC Customer Name
 RBC Customer Segment
 123 Discount
 123 Order Date
 123 Order ID
 RBC Order Priority
 RBC Postal Code
 123 Product Base Margin
 RBC Product Category
 RBC Product Container
 RBC Product Name
 RBC Product Sub-Catego...
 + Add a field
 + Add a parameter
 + Add Data

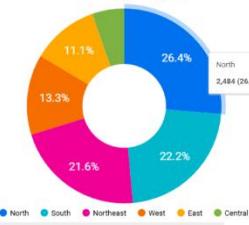
Training

File Edit View Insert Page Arrange Resource Help

Add page Add data **Add a chart** Add a control Theme and layout Pause

+ Add quick filter

Orders by Region



North 26.4%
South 22.2%
Northeast 21.6%
West 13.3%
East 11.1%

Total Sales



Sales
8,951,931.32

Chart

SETUP STYLE

Data source: Machine_Sales - Machine Sales
Data range dimension: Order Date (Date)
Fields: Location, **RBC State or Province**
Tooltip: Add dimension
Color dimension: Add dimension
Size: Add metric

Data

Search Machine_Sales - Mac...
 RBC Product Category
 RBC Product Container
 RBC Product Name
 RBC Product Sub-Catego...
 123 Profit
 123 Quantity ordered new
 RBC Region
 123 Row ID
 123 Sales
 Ship Date
 RBC Ship Mode
 123 Shipping Cost
 RBC State or Province
 123 Unit Price
 123 Record Count
 + Add a field
 + Add a parameter
 + Add Data

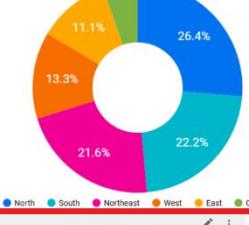
Training

File Edit View Insert Page Arrange Resource Help

Add page Add data **Add a chart** Add a control Theme and layout Pause

+ Add quick filter

Orders by Region



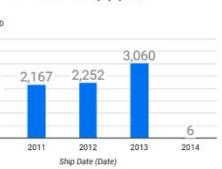
North 26.4%
South 22.2%
Northeast 21.6%
West 13.3%
East 11.1%

Total Sales



Sales
8,951,931.32

Orders Shipped



Ship Date (Year)	Order ID
2010	1,941
2011	2,167
2012	2,252
2013	3,060

Chart

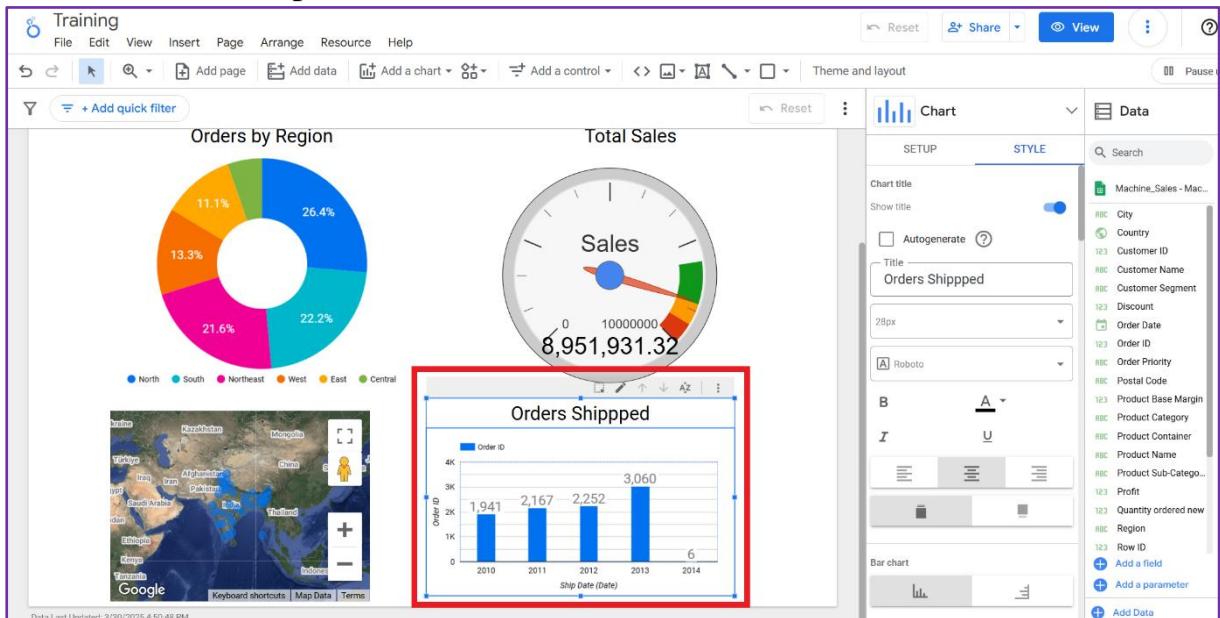
SETUP STYLE

Background layer: Use vector graphics
Type: Map (selected), Satellite
Roads: On
Landmarks: On
Labels: On

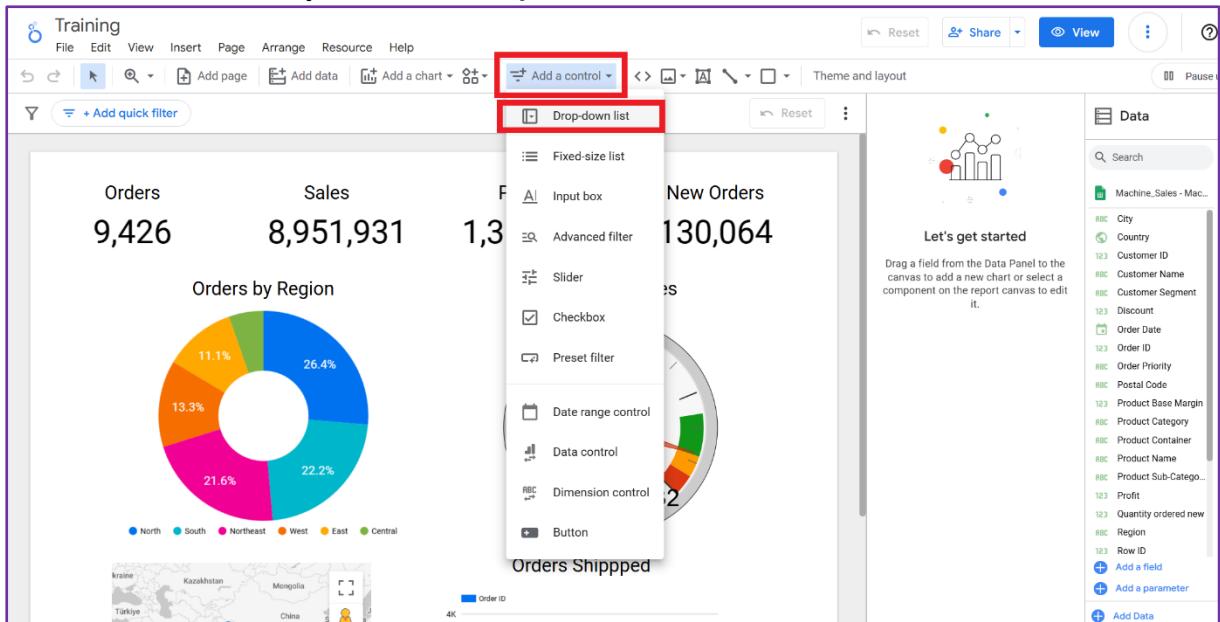
Data

Search Machine_Sales - Mac...
 RBC City
 RBC Country
 123 Customer ID
 RBC Customer Name
 RBC Customer Segment
 123 Discount
 123 Order Date
 123 Order ID
 RBC Order Priority
 RBC Postal Code
 123 Product Base Margin
 RBC Product Category
 RBC Product Container
 RBC Product Name
 RBC Product Sub-Catego...
 123 Profit
 123 Quantity ordered new
 RBC Region
 123 Row ID
 123 Sales
 Ship Date
 RBC Ship Mode
 123 Shipping Cost
 RBC State or Province
 123 Unit Price
 123 Record Count
 + Add a field
 + Add a parameter
 + Add Data

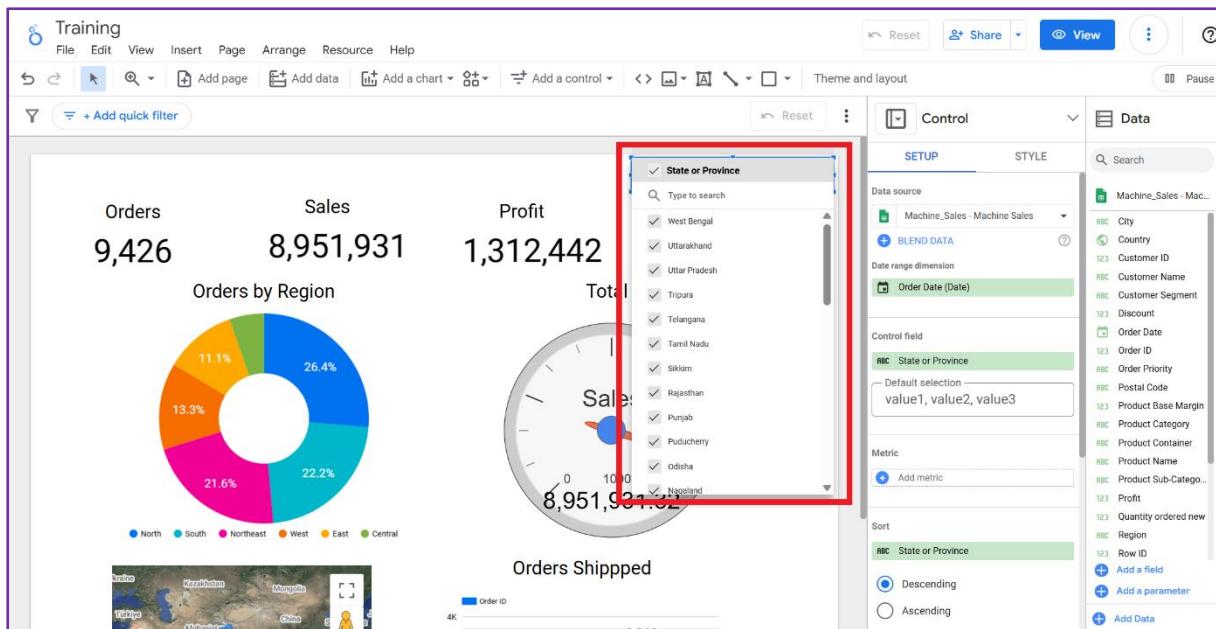
16. Similarly add a line or column chart to show count of order id by ship date to visualize the shipments.



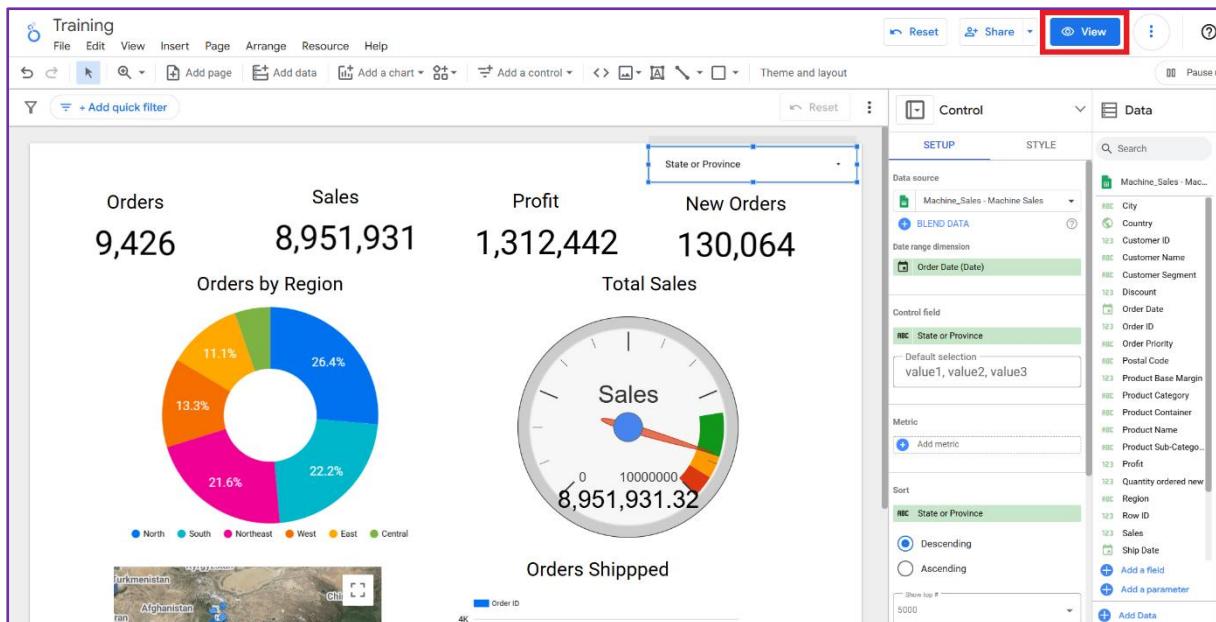
17. Click on **Add a control** and select **Drop-down list** to enable filtering of the dashboard data by **State or City**.

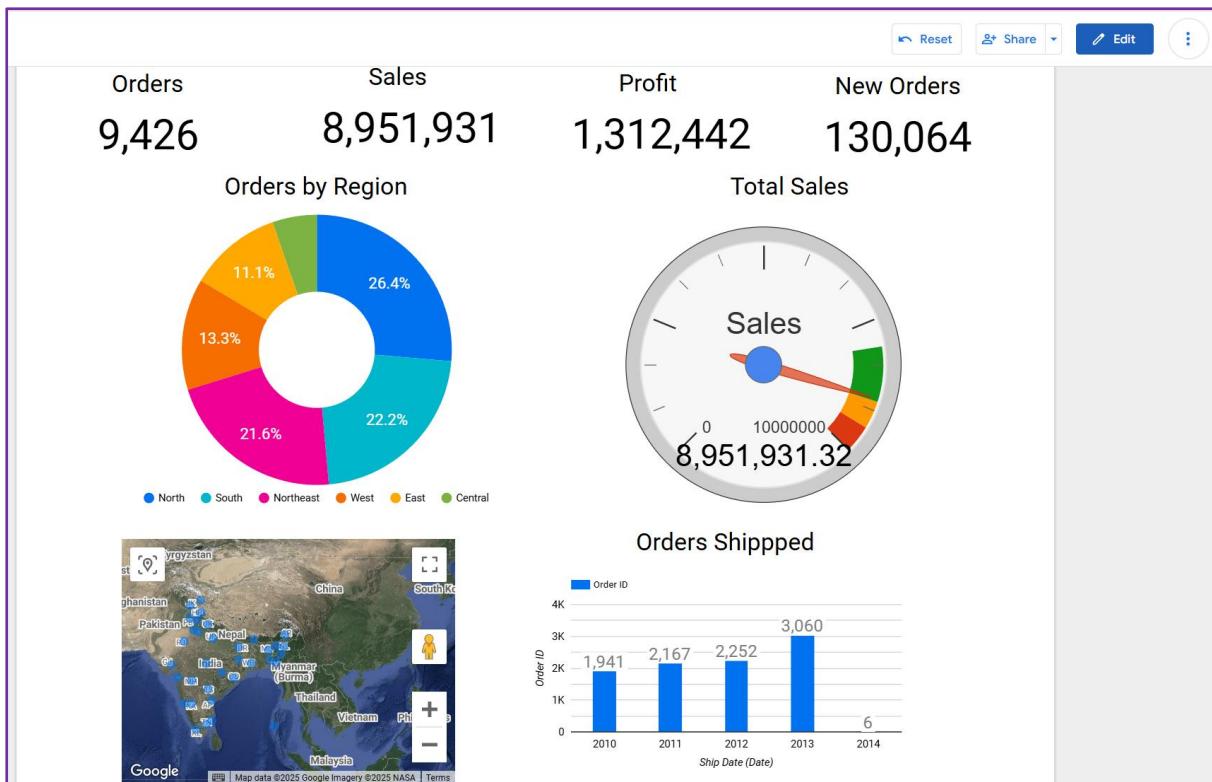


18. All visualizations in the dashboard can now be filtered based on States.

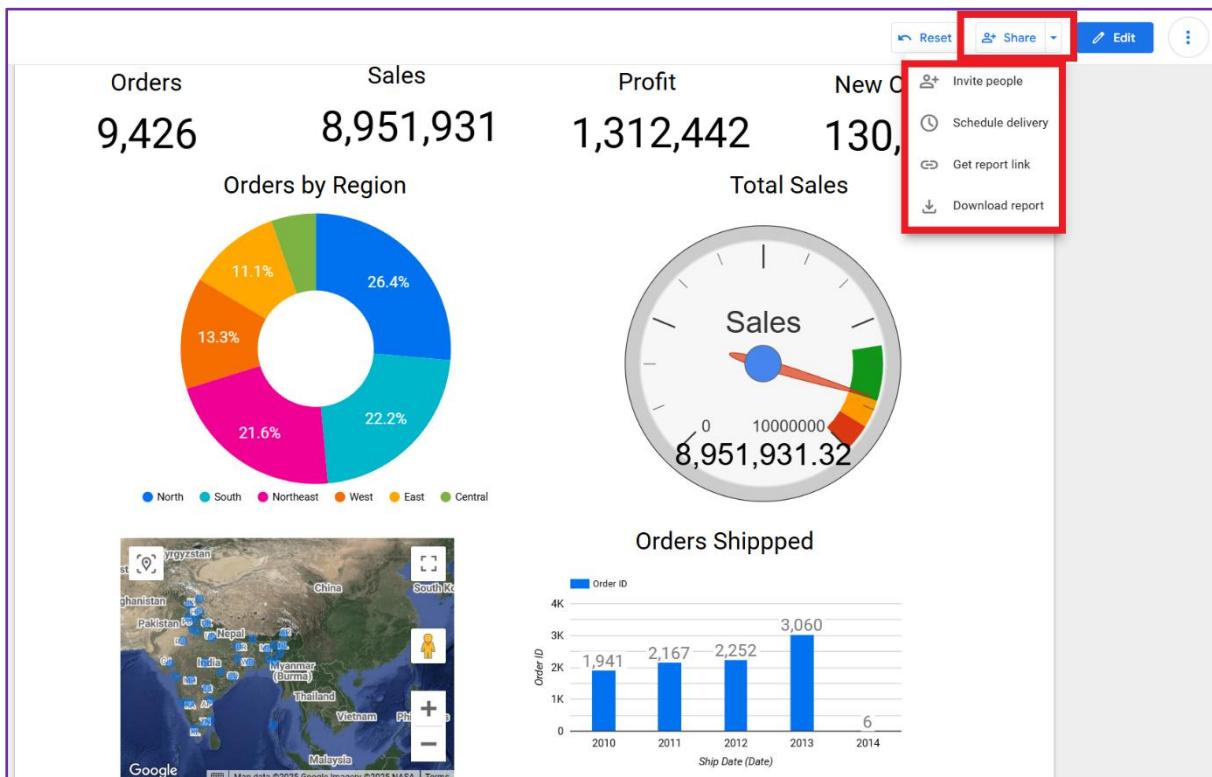


19. Click on View to test the interactive dashboard.

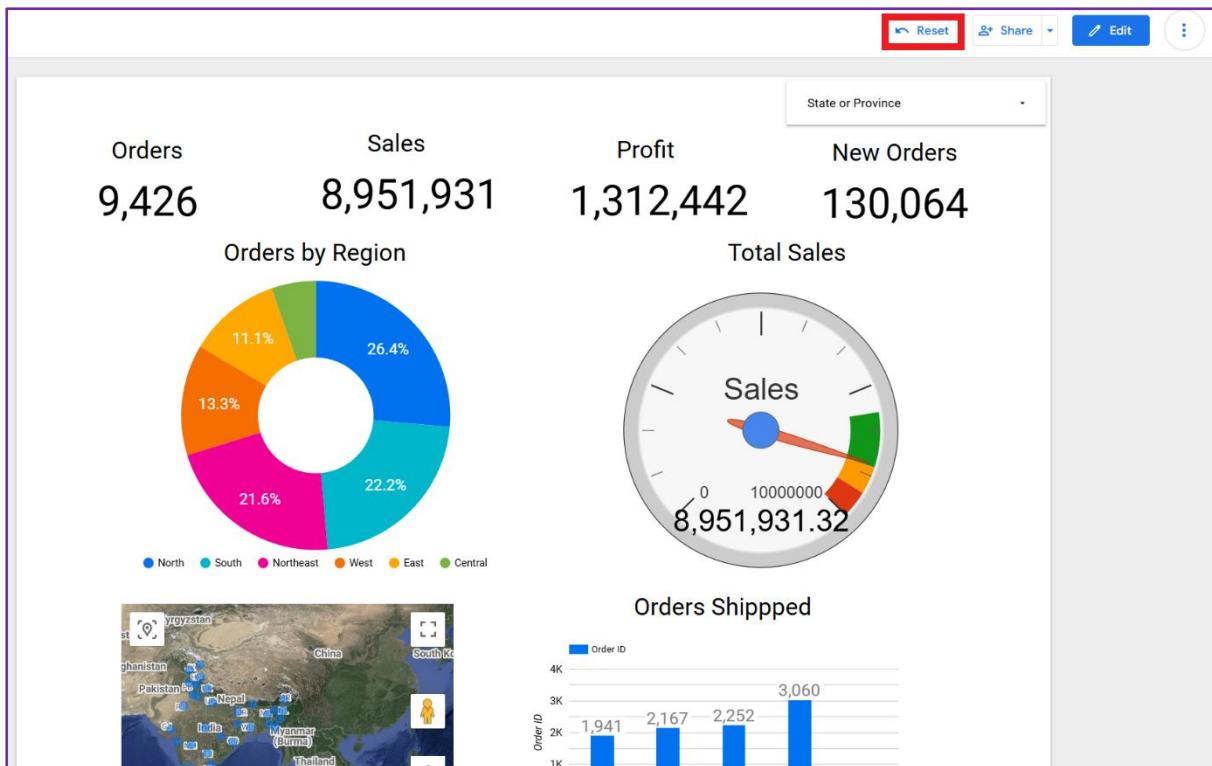




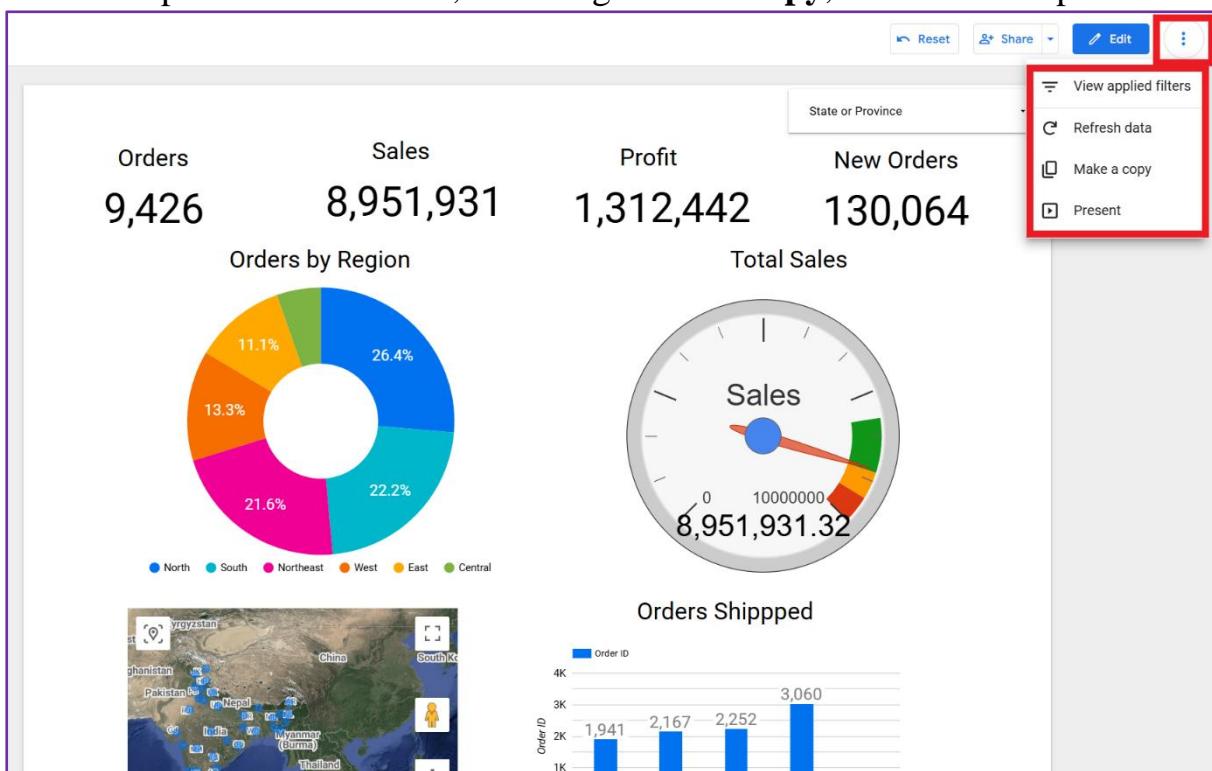
20. Click **Share** to share the document with others or download the report as a PDF.



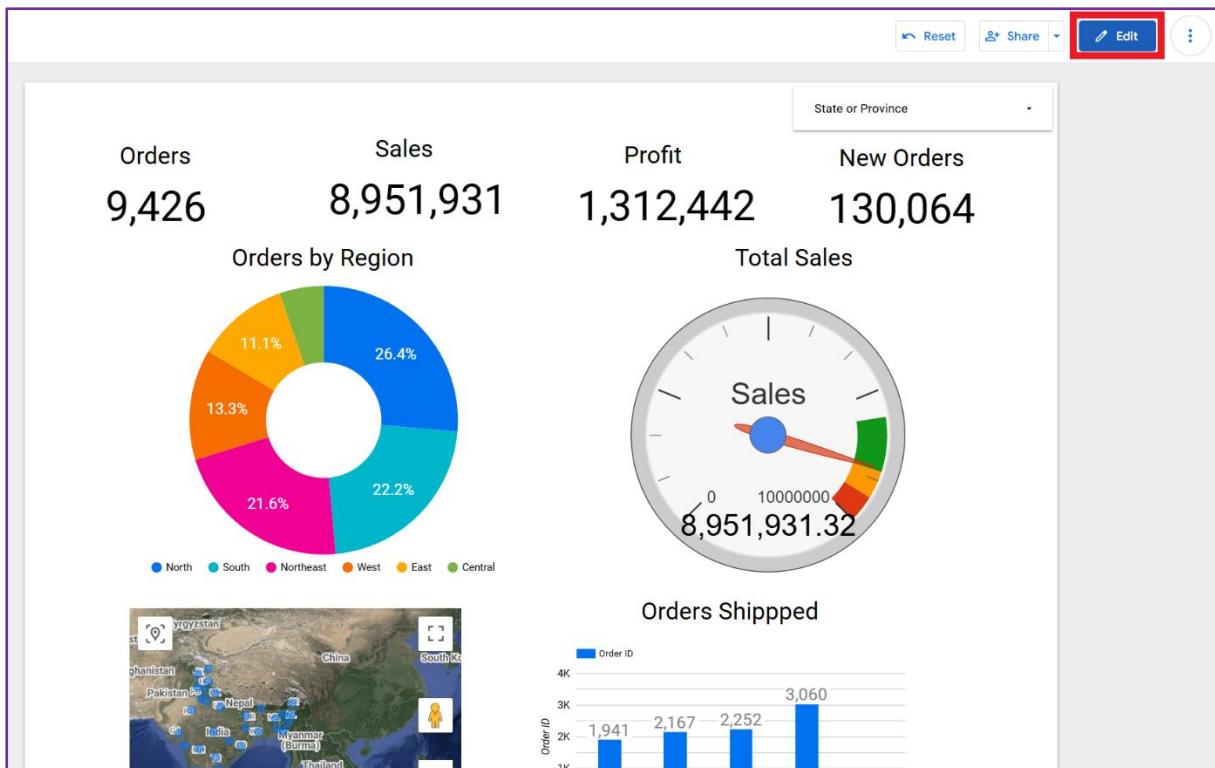
21. The **Reset** option allows you to remove all applied filters and selections on the report.



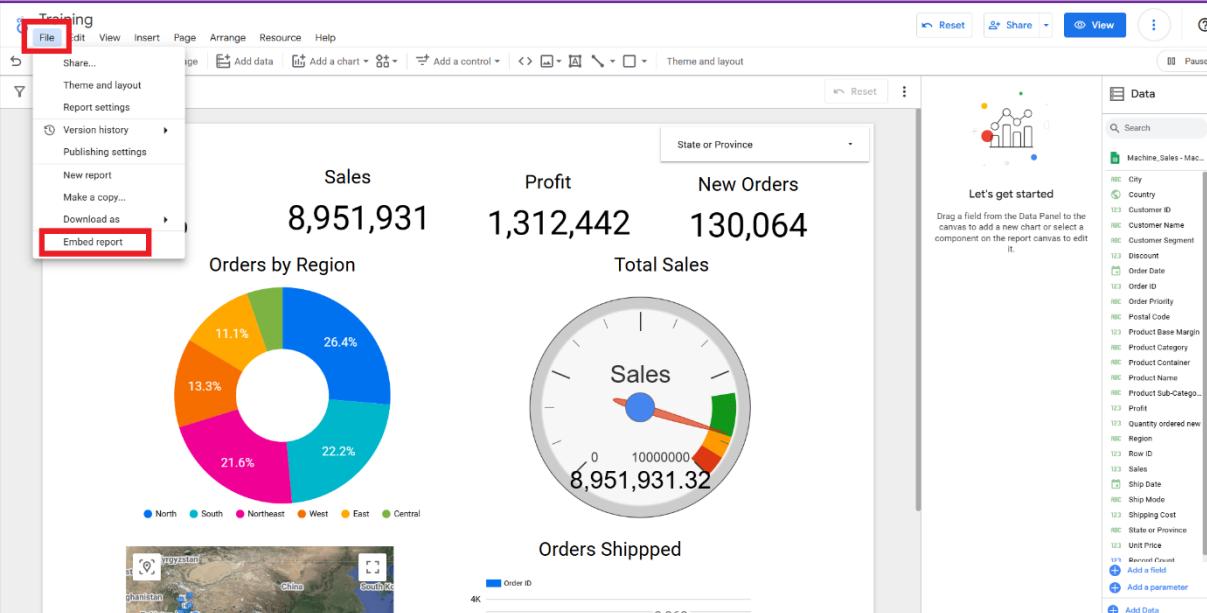
22. More options are available, including **Make a copy**, **Present** the report etc.



23. Click on **Edit** to return to the interface window.



24. Embed the report on a website using File → Embed report.



The screenshot shows the Power BI desktop application with the following details:

- File Menu:** The 'File' menu is open, and the 'Embed report' option is highlighted with a red box.
- Report Content:** The same report content as the first screenshot is displayed, including metrics, charts, and a map.
- Data Panel:** On the right side, the Data panel lists various fields from the 'Machine_Sales - Mac' dataset, such as City, Customer ID, Customer Name, Customer Segment, Discount, Order Date, Order ID, Order Priority, Postal Code, Product Base Margin, Product Category, Product Container, Product Name, Product Sub-Categ..., Profit, Region, Row ID, Sales, Ship Date, Ship Mode, Shipping Cost, State or Province, Unit Price, and more.